

I CLAIM:

1. A method of initiating compression of an Internet Protocol (IP) header of each packet of a stream of packets to be sent from a source apparatus to a destination apparatus in a packet switched network, said source apparatus being connected to said packet switched network by a first node and said destination apparatus being connected to said packet switched network by a second node, said method comprising the steps of:

modifying, at said first node, the IP header of a full header packet of the stream of packets so that a destination address field of the IP header contains a second node address indicating a location of the second node;

inserting, at the first node, a routing header in the full header packet of the stream of packets, said routing header having context identification (CID) information identifying information of the IP header and a destination address indicating a location of the destination apparatus;

transmitting, from the first node to the second node, said full header packet including the modified IP header and the inserted routing header; and

initiating header compression of IP headers of packets of the stream of packets subsequent to the full header packet, when the second node receives said full header packet including the modified IP header and the inserted routing header.

2. A method according to claim 1, wherein each of said first and second nodes is a router.

3. A method according to claim 1, further comprising the step of:

compressing IP header of each of the subsequent packets when IP header compression has been initiated.

4. A method according claim 3, wherein said compressing step comprises the step of:

transmitting the subsequent packets including the CID information without an IP header.

5. A method according to claim 3, wherein said compressing step comprises the step of:

transmitting each of the subsequent packets including the CID information with a compressed IP header which includes unpredictable IP header information.

6. A method according claim 1, wherein said initiating step comprises the step of:

storing information of the IP header of the full header packet as a context in corresponding relation to the CID information.

7. A method according to claim 6, further comprising the

step of:

compressing the IP headers of each of the subsequent packets when IP header compression has been initiated.

8. A method according to claim 7, wherein said compressing step comprises the step of:

transmitting each of the subsequent packets including the CID information without an IP header.

9. A method according to claim 7, wherein said compressing step comprises the step of:

transmitting each of the subsequent packets including the CID information with a compressed IP header which includes unpredictable IP header information.

10. A method according to claim 8, further comprising the step of:

decompressing each of the subsequent packets by using the CID information included in the subsequent packet to refer to the stored context.

11. A method according to claim 9, further comprising the step of:

decompressing each of the subsequent packets by using the CID information included in the subsequent packet to refer to the stored context.

12. A method of initiating compression of an Internet Protocol (IP) header of each packet of a stream of packets to be sent from a source apparatus to a destination apparatus in a packet switched network, said source apparatus being connected to said packet switched network by a first node and said destination apparatus being connected to said packet switched network by a second node, said method comprising the steps of:

modifying, at said first node, the IP header of a full header packet of the stream of packets so that a destination address field of the IP header contains a second node address indicating a location of the second node;

modifying, at the first node, a routing header in the full header packet of the stream of packets to include context identification (CID) information identifying information of the IP header and a destination address indicating a location of the destination apparatus;

transmitting, from the first node to the second node, said full header packet including the modified IP header and the modified routing header; and

initiating header compression of IP headers of packets of the stream of packets subsequent to the full header packet, when the second node receives said full header packet including the modified IP header and the modified routing header.

13. A method according to claim 12, wherein each of said

first and second nodes in a router.

14. A method according to claim 12, further comprising the step of:

compressing IP header of each of the subsequent packets when IP header compression has been initiated.

15. A method according claim 14, wherein said compressing step comprises the step of:

transmitting the subsequent packets including the CID information without an IP header.

16. A method according to claim 14, wherein said compressing step comprises the step of:

transmitting each of the subsequent packets including the CID information with a compressed IP header which includes unpredictable IP header information.

17. A method according claim 12, wherein said initiating step comprises the step of:

storing information of the IP header of the full header packet as a context in corresponding relation to the CID information.

18. A method according to claim 17, further comprising the step of:

compressing the IP headers of each of the subsequent packets when IP header compression has been initiated.

19. A method according to claim 18, wherein said compressing step comprises the step of:

transmitting each of the subsequent packets including the CID information without an IP header.

20. A method according to claim 18, wherein said compressing step comprises the step of:

transmitting each of the subsequent packets including the CID information with a compressed IP header which includes unpredictable IP header information.

21. A method according to claim 19, further comprising the step of:

decompressing each of the subsequent packets by using the CID information included in the subsequent packet to refer to the stored context.

22. A method according to claim 20, further comprising the step of:

decompressing each of the subsequent packets by using the CID information included in the subsequent packet to refer to the stored context.

23. A router for use in a packet switched network for initiating compression of an Internet Protocol (IP) header of each packet of a stream of packets to be sent from a source apparatus to a destination apparatus in the packet switched network, said source apparatus being connected to said packet switched network by said router and said destination apparatus being connected to said packet switched network by another router, said router comprising:

first apparatus which modifies the IP header of a full header packet of the stream of packets so that a destination address field of the IP header contains an address indicating a location of said another router;

second apparatus which inserts a routing header in the full header packet of the stream of packets, said routing header having Context Identification (CID) information identifying information of the IP header in a destination address indicating a location of said destination apparatus;

third apparatus which transmits to said another router said full header packet including the modified IP header and the inserted routing header to initiate header compression of the IP header of each packet of the stream of packets subsequent to the full header packet upon receipt in said another router of said full header packet including the modified IP header and the inserted routing header.

24. A router according to claim 23, further comprising:

fourth apparatus which compresses the IP header of each of the subsequent packets when IP header compression has been initiated.

25. A router according to claim 24, wherein said fourth apparatus comprises:

fifth apparatus which transmits the subsequent packets including the CID information without an IP header.

26. A router according to claim 24, wherein said fourth apparatus comprises:

sixth apparatus which transmits each of the subsequent packets including the CID information with a compressed header which includes unpredictable IP header information.

27. A router according to claim 23, wherein said third apparatus comprises:

seventh apparatus which stores information of the IP header of the full header packet as a context in corresponding relation to the CID information.

Sub A2 28. A router according to claim 27, further comprising eighth apparatus which compresses the IP headers of each of the subsequent packets when the IP header compression has been initiated.

29. A router according to claim 23, further comprising:
ninth apparatus which stores information of the IP header of said full header packet in corresponding relation to the CID information in response to receipt of said full header packet including the modified IP header and the inserted router header from said another router.

30. A router according to claim 29, further comprising:
tenth apparatus which decompresses packets subsequent to the full header packet according to the stored CID information.